

## 14. Все дальние планы и ландшафты на Луне сняты с помощью кукол и макетов

16-20 minutes

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The lunar epic called "Apollo" was filmed according to the same scheme as any other Hollywood films, when it was required to show objects or events that did not exist in reality, such as the destruction of cities, aircraft crashes, volcanic eruptions and other cataclysms - all this was done with using layouts, miniature copies and models. "Lunar landscapes" for Apolloniada, since there were no similar ones on Earth, were created by decorators in the pavilions. This is the most common filmmaking practice.

Even now, despite the high quality of computer graphics, many shots in films are still shot using mock-ups. For example, in the 2008 film *Indiana Jones and the Kingdom of the Crystal Skull*, the destruction of a small village during a nuclear bomb test was filmed - several streets of the town fit into a small area.



Destruction of houses in the film "Indiana Jones and the Kingdom of the Crystal Skull", USA, 2008

And this is the preparation of a shot for a film about BJames Bond, "Golden Eye". Decorators recreated the area in the pavilion required for the plot.



Preparation of the scenery for the film "Golden Eye", 1995 (In the depths of the frame, just around the corner, there are two more decorators.)

In the same way, the decorators recreated the "lunar terrain" in the pavilion.

On the Internet, you can find versions that the shooting of the "lunar" frames was carried out in an open area in a large meteorite crater at night. And they even give photographs of landscapes similar to the Moon.

In our opinion, the shooting could not have been done in an open area. A light breeze could sweep away the footprints left on the sand by the astronauts. And for the photo shoots, it was necessary that the footprints in the sand remained unchanged for many shooting days. Therefore, the shooting was definitely carried out in a closed pavilion.

The motives why the scaled-down decorations were used are also quite understandable. If the scenery were life-size (for example, they found a suitable area in the lower reaches of the mountains), then how to illuminate this area? How to fix the lighting fixtures motionless at a height of about 200 meters above the ground? And where to get such powerful devices that would create the high illumination necessary for filming on the set, being 200-300 meters away? Such devices do not even exist theoretically.

Therefore, the shooting of "lunar shots" for the series "Astronauts on the Moon" was carried out in a way that was worked out in production: on the middle and general shots, the actors worked in props suits, and on the far shots, the actors were replaced by dolls, which were placed among the models of hills and craters.

All the scenes of "being on the moon" were filmed, albeit in large, but not in huge pavilions - the shooting area did not exceed half of the football field in area.

There was a previous article on this topic ["NASA showed puppet cartoons to prove that humans were on the moon."](#) In that article, we were talking about two videos stretched over several minutes. Today we'll talk about photographs.

We can say with 100% certainty that all long-range shots in any Apollo missions were filmed in the pavilion using models and puppets. These dolls-astronauts were placed among the fake "lunar" landscape next to the smaller copies of the rover and lunar module. There is no question - there is an actor in the shot or a doll, there is no doubt about this, there is no doubt about another - what was the scale of these layouts, 1: 8 or 1: 6? When we see long-range plans with a small figure of an astronaut in NASA's "lunar images", then the dolls there are, most likely, 25 cm high, and the models of the lunar module and rover in a 1: 8 reduction.

The use of dolls imposes serious restrictions - the dolls themselves cannot move, and therefore you always need to come up with something to justify their immobility in several successive photo frames - supposedly the astronaut carried out some kind of measurement or ground fence there.

In this regard, as you understand, now we will not consider individual "lunar" photographs, but a series of sequential photographs.

For example, in three consecutive frames of the Apollo 15 mission, taken at intervals in time, we see a stationary doll, with a fake camera, frozen in the same, difficult to hold position, with a raised left foot.

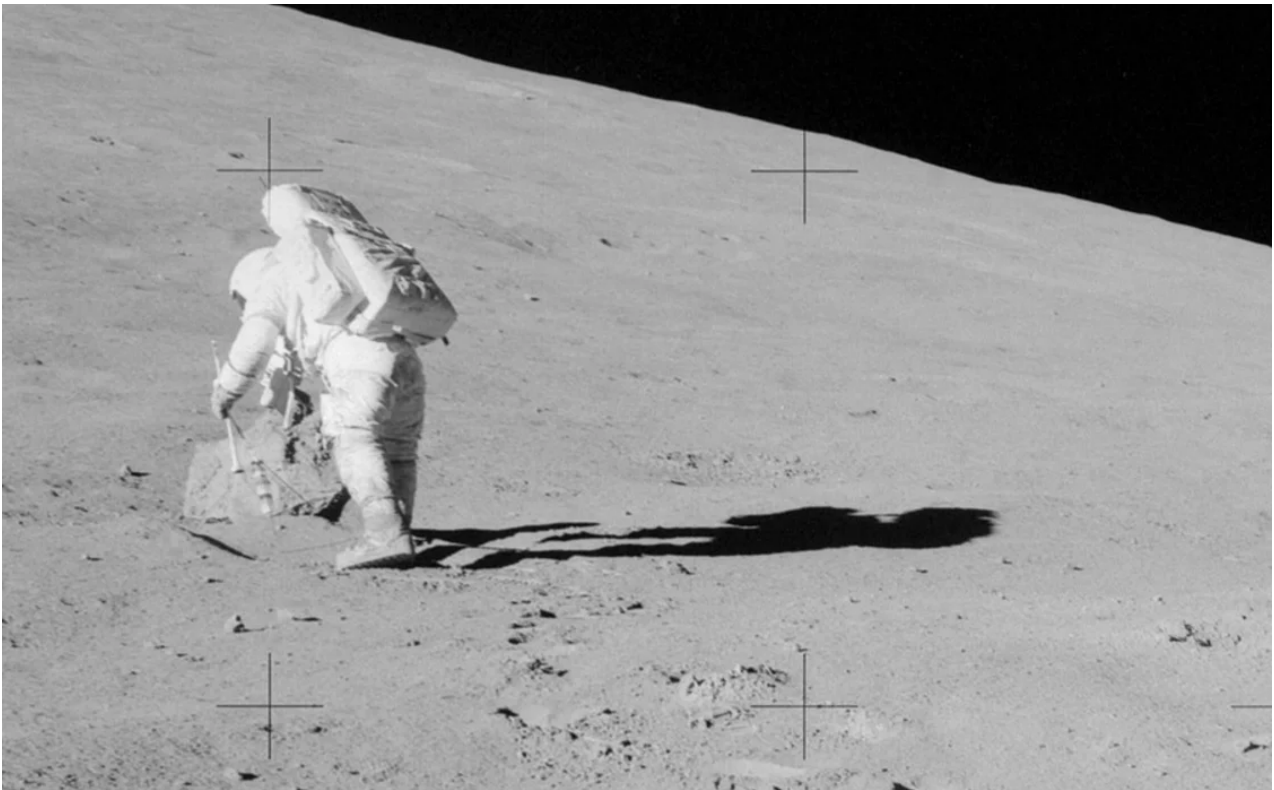




Three consecutive images with a stationary doll from the Apollo 15 mission.



This is how it looks when enlarged.



Enlarged fragment of AS15-85-11437 image. The astronaut's figure is equally frozen in all three frames. This is a doll about 25 cm high.

To prevent the doll from falling from such an inclined position, it is propped up with the tools that it holds in its hands. At a cursory inspection, it seems that the doll is doing something there, changing its position, but in fact it is practically motionless. As it is done in an ordinary puppet cartoon, from frame to frame only a couple of millimeters change the position of the arm or leg. The illusion of a strong change is created due to the fact that the photographer changes his position relative to the subject of photography - he not only rotates along the axis to the right and tilts the camera up and down, but also shifts horizontally, as if walking behind the doll's back.

In the next triad of frames, and this is already a different place, a doll also appears instead of a real person.



Another triad of frames from the Apollo 15 mission with a toy rover and a doll.

And again, the astronaut doll stands in an unnaturally unstable position, but does not fall, only because it is hooked on a part on the rover with one hand.

This time the puppeteers did a little work: from frame to frame they slightly changed the position of the doll's body.



Fragment of AS15-85-11449 snapshot. The doll froze in an unstable position.

In the frames, we see a horizontal line cutting the frame in about two parts. The upper part of the lunar landscape is the backdrop. How it was made is a topic for a separate article that will appear shortly.





There is a horizontal dividing line in the middle of the frame - the frame consists of two independent parts.

In the 50s, the lunar landscape (backdrop) for the film was painted by an artist. And although no one imagined in those years how the lunar landscape actually looks from the height of human growth, in the films of those years, its unnaturalness and drawing were immediately evident.



Lunar landscape from the movie "Destination - Moon", USA, 1950

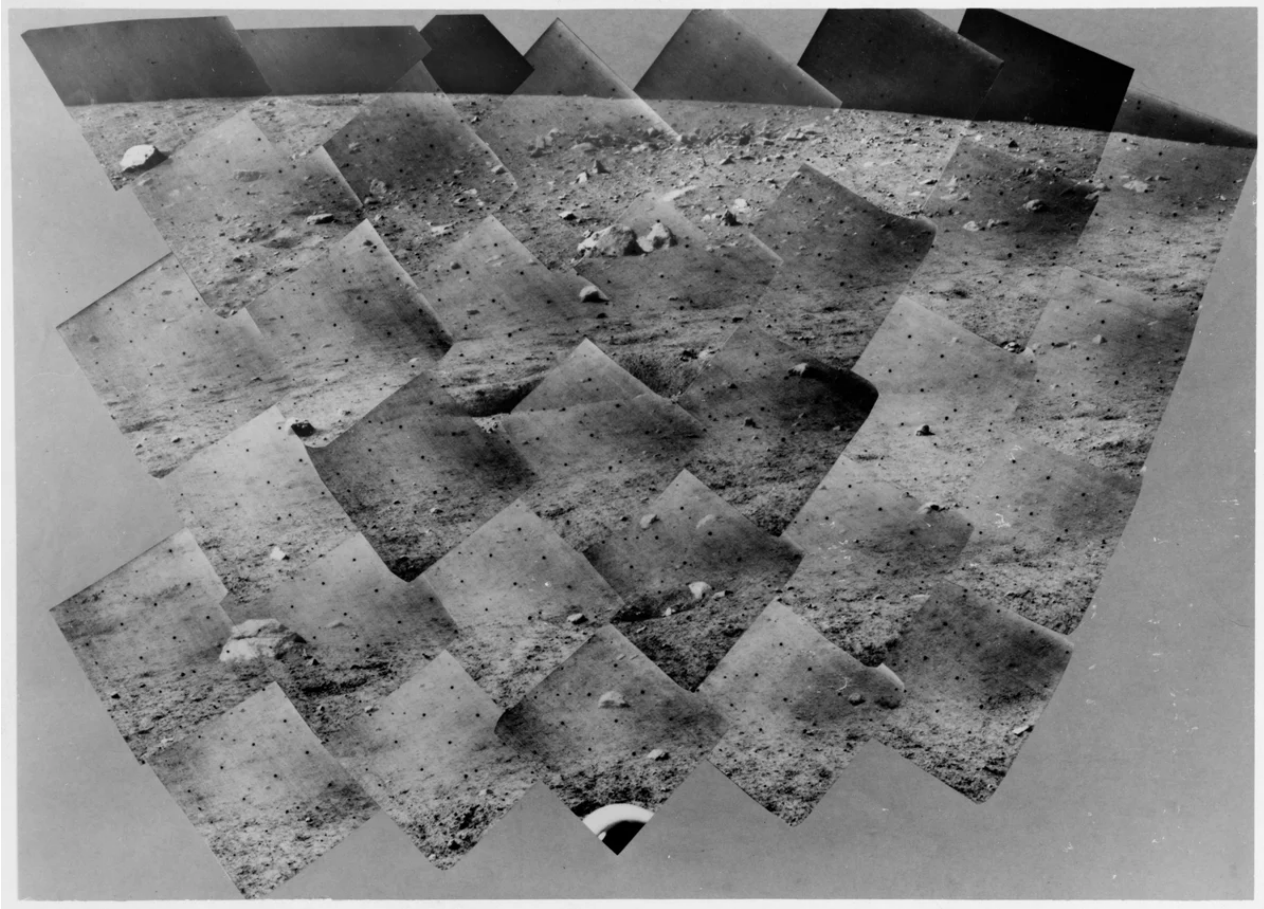
By the mid 60s. the first images of the lunar surface were obtained at close range. On February 3, 1966, for the first time in the history of space exploration, the automatic interplanetary station Luna-9 (USSR) made a soft landing on the lunar surface and transmitted to the Earth several circular television panoramas of the lunar surface at different positions of the Sun's altitude. The resolution of a panoramic image, even according to modern concepts, is simply amazing: 6000 lines of 500 elements.



Part of the photo panorama transmitted by the Luna-9 AMS to Earth in 1966.



Then the American Surveyors were also able to take pictures of the lunar landscape. Since the resolution of the TV camera installed on the AMC was very low (the maximum quality corresponded to the resolution of 800 x 600 lines), the landscape (panorama) was composed like a jigsaw puzzle of more than a hundred pictures taken from the same place by the Surveyor TV camera at different angles of rotation of the TV camera and mirrors above the lens.



Lunar landscape, composed of several dozen pictures taken by "Surveyor".

In the second half of the 60s. In the twentieth century, it became clear what kind of landscape should be selected for the background.

During the six "landings" on the moon (1969-1972) NASA tried several different options for making the backdrop. In some cases, it was a flat vertical screen onto which a slide with a mountain image (photophone) was projected. We wrote about this in the article "[The Americans filmed all the moon landings in the same pavilion](#) . " In other cases, these were models of mountains, hollow inside, similar to those you see in the next photo, from the laboratory of combined surveys of the All-Russian State Institute of Cinematography.

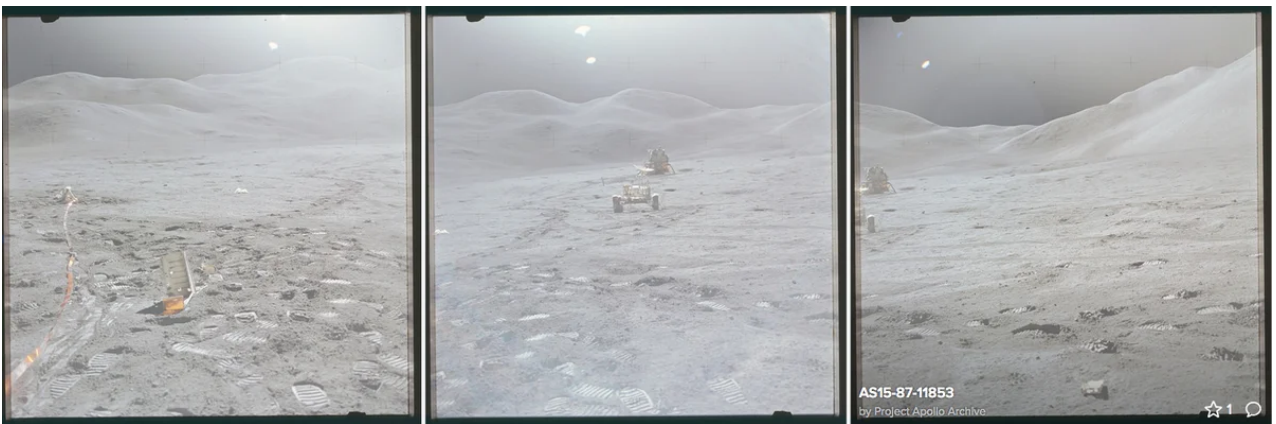




Artificial hills in the laboratory of combined surveys at VGIK for shooting models.

Making a realistic background is such an interesting topic that it deserves a separate detailed discussion.

In the meantime, we will consider a few more photos from the "lunar" panoramas - long-range plans with the lunar module and the rover. These are models, reduced copies, at a scale of approximately 1: 8. Probably, the mock-up of the lunar module did not look very plausible, so the frames with the module, as it were, accidentally fell under strong illumination, which made the "blackness" of space turned into "milk".



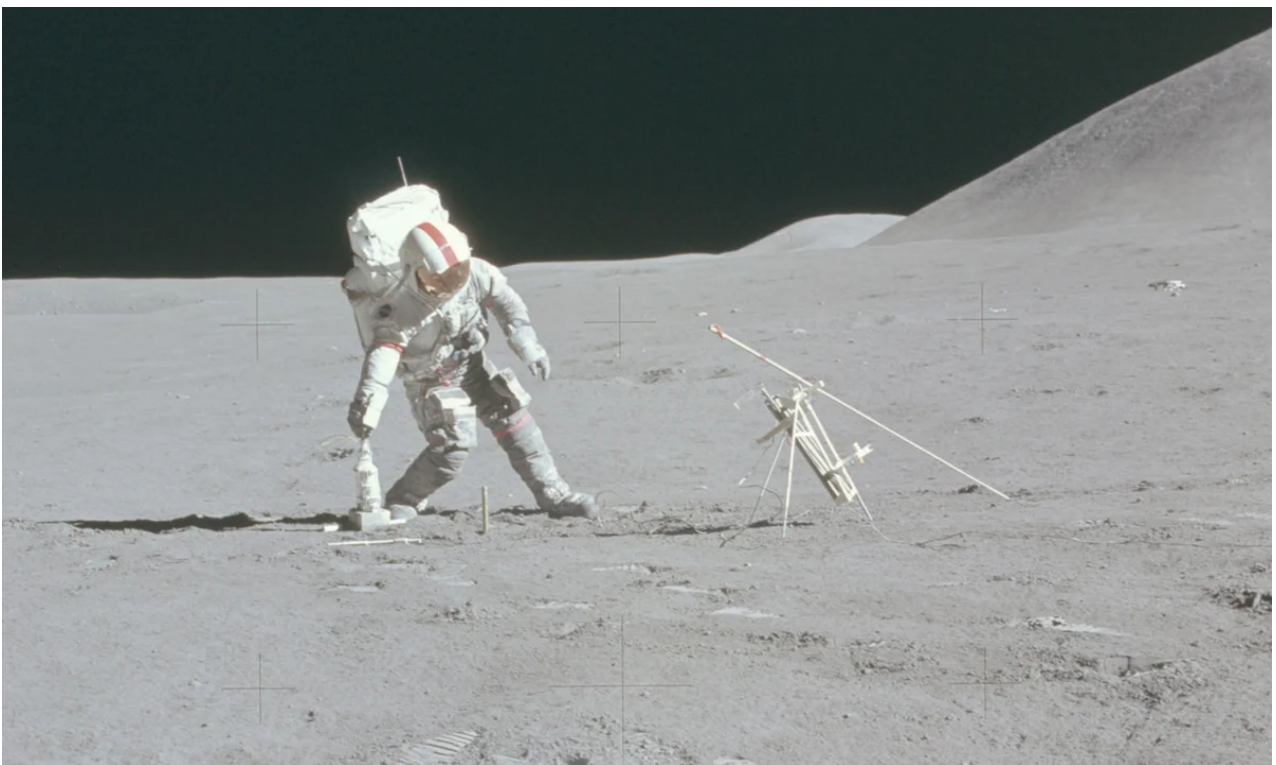
The Apollo 15 mission. Distant shots with mock-ups were exposed to light.

Since these three shots with the toy rover and the lunar module represent the last part (end) of the panorama, the beginning of the panorama is filmed in the same scenery and also with toys.



The frames of the beginning of the panorama.

The astronaut at the beginning of the panorama is just a doll, frozen in an unstable position. And so that she would not fall, they rested her right hand on the stand.



The doll at the beginning of the panorama. A stand is at hand so that the doll does not fall.

We believe that the dolls were deliberately filmed in such unstable positions, as if it were a stopped phase of some movement. After all, if you put the doll strictly vertically, then even a schoolboy will notice the catch and understand that they are trying to deceive him with the help of props.

The Americans managed to make a small copy of the rover quite well, since the rover is an ordinary mechanical device, an inanimate object. Plus, no one knows what this rover actually looks like up close. And they filmed this toy not only from afar, but even from a relatively close distance. The rover seemed believable, as collectible car models made to scale seem believable to us.





Scale models of vehicles (scale 1: 8).

But as soon as the astronaut doll was placed on the toy rover, the whole effect of believability disappeared completely. Immediately there was a feeling that a light, motionless doll with no signs of life was sitting on the rover.





A doll on a toy rover from the Apollo 17 mission.

If you think that such a frame with a doll in the Apollo 17 mission is the only one, then you are mistaken. There are several dozen such frames! The use of dummies and dolls is the most common NASA technique for obtaining long-range shots and "lunar" landscapes. Three shots of a toy rover and a doll seated on it follow one after the other.



Three consecutive shots from the Apollo 17 mission with a toy rover and a stationary doll.

After these three frames, there are three more frames of the same rover, only from a slightly different distance. Of course, this is all filmed in the same set. But here's what's strange: during the time these three frames were being filmed, and then they moved to another place and started filming the rover with the astronaut again, the doll did not move a millimeter. It's just some kind of creepy unprofessional puppeteers. After all, to shoot "Hasselblad" even 3 frames, it takes a relatively long time. The Hasselblad film camera does not shoot as fast as modern digital cameras (in a certain mode, a digital camera can shoot several frames per second). How does Hasselblad shoot? After pressing the shutter button in the camera, a light slit runs along the film between two moving shutter curtains, after that, the motor turns on to rewind the film to the next frame, and the shutter is re-cocked. This takes about two seconds. It takes a certain amount of time to shoot three frames with the camera panning, then move away to another point in an uncomfortable spacesuit, aim and start shooting a new series of frames. But NASA did not even try to give the shots at least some kind of vital authenticity - they just stupidly shot the doll three times without movement, moved to another place and again began to shoot the same static object.

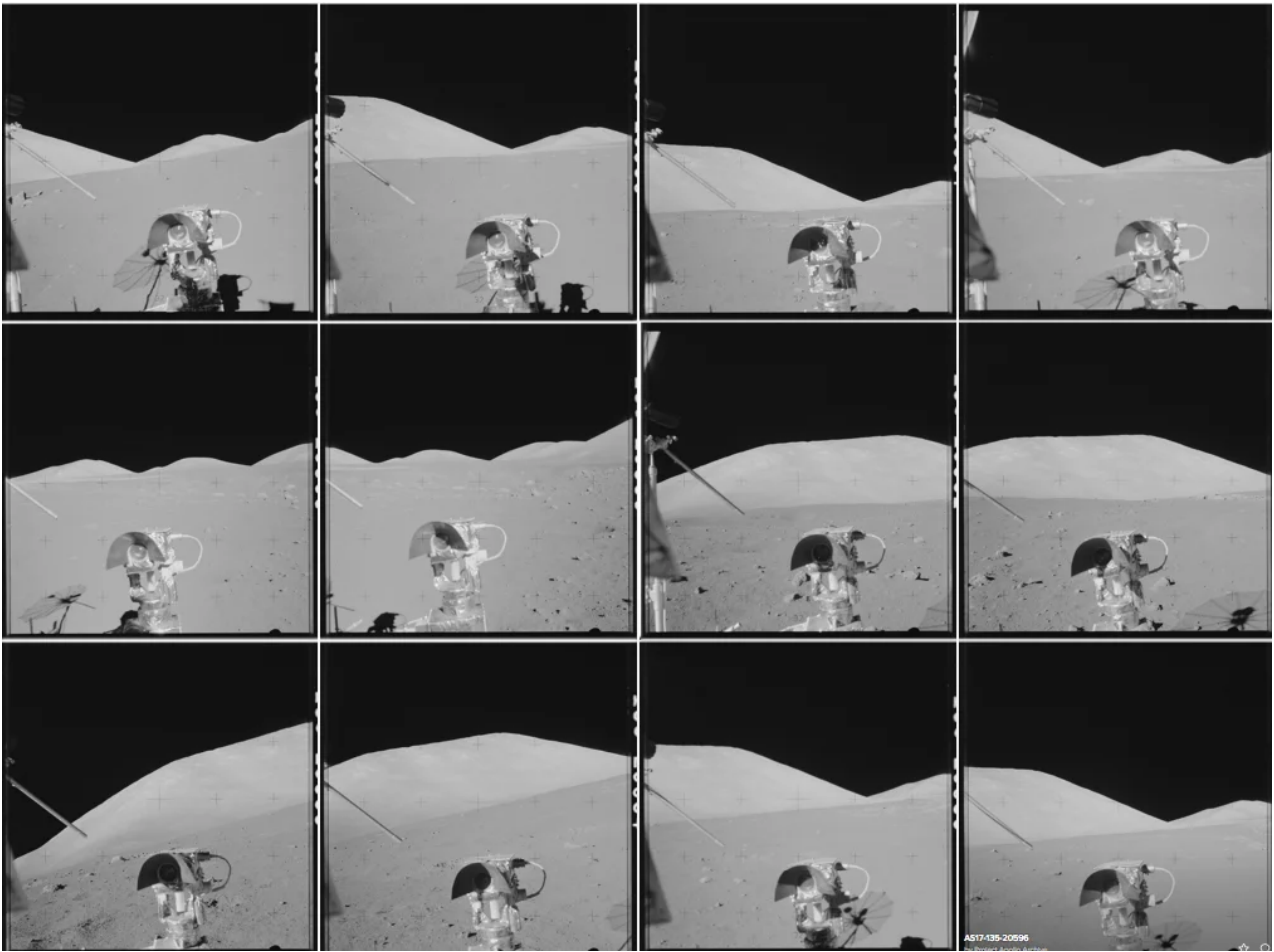
And this whole episode of the rover against the backdrop of the lunar landscape, from start to finish, was filmed in the same set. And on all one hundred frames of this cassette, only dolls and models appear. All other panoramas are also props at a scale of 1: 8. The lunar module in the frame is nothing more than a mock-up, it is quite possible that it was made of cardboard.



Apollo 17. The lunar module in the distance is just a mock-up.



And then in the cassette there were dozens of monotonous shots of the rover's passage through the pavilion. Wait. I said that there are "dozens" of frames? Not. There are hundreds of them - frames where we see only the so-called lunar landscape and a fake TV camera in the foreground.



Apollo 17. A lot of monotonous frames of passage (supposedly of a rover) among the fake mountains.

Only in one cassette (Magazine 135 / G) we counted 126 such monotonous pictures. And all these pictures are solid props - fake objects instead of real things. And in the next cassette there are about a hundred more shots of similar decorations for puppet shows. And if an astronaut appears in the photograph, as if in the distance, then you should know that this is a doll.



AS17-142-21813

by Project Apollo Archive

Apollo 17. To obtain distant shots, dolls are used, and small pebbles are laid out in the foreground. Dolls usually stand motionless.

These astronaut dolls cannot walk, so in photographs they are always immobilized, standing or sitting, frozen in the same position. They do not react to the fact that they are being photographed, they stand rooted to the spot. Only sometimes the puppeteers, as if "for decency", slightly raise the doll's hand in any one frame, but no more. Dolls cannot come close to the photographer - you will never find in any mission a sequence of photo frames when an astronaut from the depth of the frame comes to the middle ground - the dolls themselves cannot walk, and the puppeteer cannot easily approach the doll and move it, even if the distance is dolls are only 5 meters. After all, a puppeteer cannot step on a "lunar landscape" and approach a toy astronaut to correct his hand. The puppeteer has to be lowered on top of the tap every time, **So photographers shoot on the so-called Moon only panoramas from the same place with motionless astronaut dolls.**

The maximum that NASA has come up with is to tilt the camera up and down, so that there is at least some difference in neighboring frames, and in every third frame to make an exposure. Here is a comparison of three consecutive images on one set (nos. 21811, 21812, 21813, these frames are above this text) and three sequential images of another set (nos. 20758, 20759, 20760, these frames are below) from the Apollo 17 mission, NASA's catalog number is listed at the bottom of the last frame of the series. What do we see:

- first shot: subject is in the center or below the center of the frame,
- second shot: subject is at the top of the frame,
- the third shot: the subject is again at the bottom, and the exposure for the entire frame.





Apollo 17. The dolls in the photos are always immobilized.

When, unlike photographs, we watch a lunar video, we note to ourselves that the astronauts in the frame are scurrying about continuously, moving in dashes, not stopping for a second. About half of the time they are in the stage of jumping and flying, breaking away from the surface. If someone had photographed them, then about half of the photographs would have captured the astronauts in flight, hanging "in the air" above the surface. But all photographs, unlike movies, are somehow monotonously static, as if the astronauts are rigidly attached to the surface.

There is nothing more controversial between lunar photographs and lunar videos - between static photographs and footage of astronauts moving. As if the photographs and videos were taken by two different film crews who did not know about the existence of each other, and therefore adhered to diametrically opposite principles. In the video, the astronauts shuffle their feet, scatter the sand, so it becomes obvious that no clear marks on the sand should remain with this method of movement. And when we look at the photographs - it's the other way around - all the traces are completely clear, especially in the foreground, and - solid static.

**In the Apollo lunar missions, we counted more than 2 thousand photographs, where instead of astronauts (or actors portraying them) there are dolls and models in the photographs.**

\*

Cameraman L. Konovalov was with you



Until next time!